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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,427	04/20/2004	Yuji Iwata	119239	2553
25944	7590	06/01/2006	EXAMINER	
OLIFF & BERRIDGE, PLC				GOLDBERG, BRIAN J
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ALEXANDRIA, VA 22320				
		ART UNIT		PAPER NUMBER
		2861		

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/827,427	IWATA, YUJI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Brian Goldberg	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 20 April 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-10 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2 and 5 is/are rejected.  
 7) Claim(s) 3,4 and 6-10 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 20 April 2004 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4/20/04, 9/14/05</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

2. Claims 1-10 are objected to because of the following informalities:

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3. Regarding claim 1, the limitation "the discharge heads mounted to the openings at the same temperature as that when the functional liquid is discharged from the discharge heads" is a product-by-process limitation, and therefore does not hold patentable weight. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."

4. Claim 3 recites the limitations "the positions" in line 2 of the claim, "the distance" in line 4 of the claim, and "the measurement results" in line 7 of the claim. There is insufficient antecedent basis for these limitations in the claim.

5. Regarding claim 6, "the plurality of discharge heads mounted to the openings at the same temperature as that when the functional liquid is discharged from the plurality of discharge heads" is not an active method step. It is not clear if this step is part of the printing process and therefore occurs for each print job and it is also unclear when the step occurs in the method. Also, claim 6 recites the limitations "the plurality of discharge heads in line 2 of the claim, "the cavities" in line 4 of the claim and "the openings" in line 8 of the claim. There is insufficient antecedent basis for these limitations in the claim.

6. Regarding claim 8, the claim states that it is the method according to claim 4, but claim 4 is not a method claim. Examiner assumes applicant is referring to claim 6.

Appropriate correction is required. Also, claim 8 recites the limitations “the positions” in line 2 of the claim and “the distance” in line 3 of the claim. There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujii et al. (US 6371598).

8. Regarding claim 1, Fujii et al. disclose “nozzles (1021); cavities communicating with the nozzles (1006); a plurality of discharge heads (see Fig 1 and 16, where a combination of elements constitute a discharge head, such as 1005, 1006, 1012, 1014) to pressurize functional liquid contained in the cavities communicating with the nozzles and discharging the functional liquid from the nozzles (col 20 ln 49-53); a mounting plate (1002) having openings (1021) to mount the plurality of discharge heads; a tank containing the functional liquid (col 17 ln 46-48, or reservoir 1010 can be considered a tank); and a liquid supply channel to supply the functional liquid from the tank to the discharge heads (col 17 ln 46-49, or channel 1009).”

9. Regarding claim 2, Fujii et al. disclose “the mounting plate having a heating device to heat the mounting plate (col 14 ln 22-26, col 18 ln 22-23).”

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujii et al. in view of Hotomi et al. (US 6336715). Fujii et al. disclose the claimed invention as set forth above with respect to claim 1. Thus Fujii et al. meet the claimed invention except "the plurality of discharge heads fixed to the openings in the mounting plate with an adhesive."

12. Hotomi et al. teach "the plurality of discharge heads fixed to the openings in the mounting plate with an adhesive (col 6 ln 26-28)." It would have been obvious to one of ordinary skill in the art to use an adhesive. One would have been motivated to so modify Fujii et al. for the benefit of creating a more durable liquid discharger.

13. Claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, as well as correcting the minor informalities objected to above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goldberg whose telephone number is 571-272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on 571-272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian Goldberg *BF*  
AU 2861  
May 22, 2006

*[Signature]*  
Vip Patel  
Supervisory Examiner  
Art Unit 2861